



BUILDING CODE COMPLIANCE OFFICE (BCCO)
PRODUCT CONTROL DIVISION

MIAMI-DADE COUNTY, FLORIDA
METRO-DADE FLAGLER BUILDING
140 WEST FLAGLER STREET, SUITE 1603
MIAMI, FLORIDA 33130-1563
(305) 375-2901 FAX (305) 375-2908

NOTICE OF ACCEPTANCE (NOA)

GAF Material Corporation
1361 Alps Road
Wayne, NJ 07470

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed by the BCCO and accepted by the Building Code and Product Review Committee to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The BCCO (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. BCCO reserves the right to revoke this acceptance, if it is determined by BCCO that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the Florida Building Code and the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: GAF Conventional Built-Up-Roof System for Concrete Decks.

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA revises NOA No. 08-0221.04 and consists of pages 1 through 19.
The submitted documentation was reviewed by Jorge L. Acebo.



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Approval Date: 05/05/10
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ROOFING SYSTEM APPROVAL

Category: Roofing
Sub-Category: BUR
Deck Type: Concrete
Maximum Design Pressure -457.5 psf

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
Leak Buster™ Matrix™103 Cold Process Adhesive	5 gallons	ASTM D3019	Cold Applied Asphalt Adhesive.
LeakBuster™ Matrix™ 204 Wet/Dry Roof Cement	3, 5 gallons	ASTM D3019 ASTM D3409	Refined asphalt blended with a mineral stabilizer and fibers. Permits adhesion to wet and dry surfaces.
LeakBuster™ Matrix™ 303 Premium Fibered Aluminum Roof Coating	3, 5 gallons	ASTM D2824	Fibered aluminum coating.
LeakBuster™ Matrix™ 304 Non- Fibered Aluminum Roof Coatings	5 gallons	ASTM D2824, Type I	Non-fibered. Aluminum pigmented, asphalt roof coating
LeakBuster™ Matrix™ 305 Fibered Asphalt Emulsion	5 gallons	ASTM D1227	Surface coating for smooth surfaced roofs.
LeakBuster™ Matrix™ 307 Premium Asphalt Primer	5, 55 gallons	ASTM D41	Asphalt concrete primer used to promote adhesion of asphalt in built-up roofing.
Leak Buster™ Matrix™ 322 Elastomeric Roof Coating		ASTM D1653 ASTM D12 ASTM E470 ASTM D6038	Surface coating for smooth surfaced and mineral surfaced roofs.
GAF Mineral Shield® Granules	60 lb. & 100 lb bags	ASTM D1863	Granules for surfacing of exposed asphalt, cold process cement or emulsion. GAF Mineral Shield® Granules shall be used for flashing applications only.

<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
TOPCOAT® FireShield MB, FireShield SB	5, 55 gallons	ASTM D412 ASTM D21 ASTM D1475 ASTM E1644	Elastomeric roofing membrane
TOPCOAT® EnergyCote™ Elastomeric Coating		Proprietary	Surface coating for smooth surfaced and mineral surfaced roofs.
TOPCOAT® Surface Seal SB		ASTM D412 ASTM B117 ASTM C794 ASTM G21 FTMS141.6271 ASTM D21 ASTM D1475 ASTM E1644	Surface coating for smooth surfaced and mineral surfaced roofs.
GAF Built-Up Roofing Asphalt	100 lb. cartons, bulk	ASTM D312, Types I, II, III and IV	Interply mopping and surfacing asphalt
GAFLAS® #75 Base Sheet	39.37" (1 meter) Wide	ASTM D 4601	Asphalt impregnated and coated glass mat base sheet.
GAFLAS® #80 Ultima™ Base Sheet	39.37" (1 meter) Wide	ASTM D4601	Asphalt impregnated and coated, fiberglass base sheet.
GAFLAS® FlexPly™ 6	39.37" (1 meter) Wide	ASTM D2178	Type VI asphalt impregnated glass felt with asphalt coating.
GAFLAS® Ply 4	39.37" (1 meter) Wide	ASTM D2178	Type IV asphalt impregnated glass felt with asphalt coating.
GAFLAS® Mineral Surfaced Cap Sheet	39.37" (1 meter) Wide	ASTM D3909	Asphalt coated, glass fiber mat cap sheet surfaced with mineral granules.
GAFLAS® EnergyCap™ BUR Mineral Surface Cap Sheet	39.37" (1 meter) wide	ASTM D3909 Energy star™ Title 24 Compliant	Asphalt coated, glass fiber mat cap sheet surfaced with mineral granules with factory applied EnergyCote™
GAFLAS® STRATAVENT® Eliminator Perforated	39.37" (1 meter) Wide	ASTM D3672 ASTM D4897	Fiberglass base sheet coated on both sides with asphalt. Surfaced on the bottom side with mineral granules embedded in asphaltic coating with factory perforations.
GAFLAS® Flashing	various		Asphalt coated glass fiber mat flashing sheet available in three sizes.

<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
GAFGLAS® STRATAVENT® Eliminator Nailable	39.37" (1 meter) Wide	ASTM D3672 ASTM D4897	Fiberglass base sheet coated on both sides with asphalt. Surfaced on the bottom side with mineral granules embedded in asphaltic coating.
RUBEROID® MOP Smooth	39.37" (1 meter) Wide	ASTM D5147 ASTM D6298	Non-woven polyester mat coated with polymer modified asphalt. Does not have a factory applied surfacing.
RUBEROID® ULTRACLAD® SBS	1 sq. roll 101 lb.	ASTM D5147	Woven fiberglass mat coated with polymer modified asphalt and surfaced with aluminum, copper or stainless steel foil.
RUBEROID® Modified Base Sheet	39.37" (1 meter) Wide	ASTM D4601 Type II, Type G2 BUR	Premium glass fiber reinforced SBS-modified base sheet.
RUBEROID® Mop Granule	39.37" (1 meter) Wide	ASTM D6222 ASTM D5147	Non-woven polyester mat coated with polymer modified asphalt and surfaced with mineral granules.
RUBEROID® Torch Smooth	39.37" (1 meter) Wide	ASTM D5147	Heavy duty, polyester reinforced, asphalt modified bitumen membrane.
RUBEROID® Torch Granule	39.37" (1 meter) Wide	ASTM D6222 ASTM D5147	Asphalt impregnated, coated felt, surfaced with mineral granules.
RUBEROID® Torch FR	39.37" (1 meter) Wide	ASTM D6222 ASTM D5147	Heavy duty, polyester reinforced, coated with fire retardant asphalt modified bitumen membrane, granule surface.
RUBEROID® Mop Plus	39.37" (1 meter) Wide	ASTM D6164 ASTM D5147	Non-woven polyester mat coated with polymer modified asphalt and surfaced with mineral granules.
RUBEROID® Mop FR	39.37" (1 meter) Wide	ASTM D6164 ASTM D5147	Non-woven polyester mat coated with fire-retardant, polymer modified asphalt surfaced with mineral granules.
RUBEROID® 20	39.37" (1 meter) Wide	ASTM D6163 ASTM D5147	SBS modified asphalt base sheet reinforce with a glass fiber mat.
RUBEROID® 30	39.37" (1 meter) Wide	ASTM D6163 ASTM D5147	Non woven fiberglass mat coated with polymer modified asphalt and surfaced with mineral granules.
RUBEROID® 30 FR	39.37" (1 meter) Wide	ASTM D6163 ASTM D5147	Non woven fiberglass mat coated with fire retardant, polymer modified asphalt and surfaced with mineral granules.



<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
RUBEROID® EnergyCap™ SBS 30 FR	39.37" (1 meter) Wide	ASTM D6163	Non woven fiberglass mat coated with fire retardant, polymer modified asphalt and surfaced with mineral granules with factory applied EnergyCote™.
RUBEROID® Mop 170 FR	39.37" (1 meter) Wide	ASTM D6164 ASTM D5147	Non-woven polyester mat coated with fire retardant polymer modified asphalt surfaced with mineral granules.
Vent Stacks (metal and plastic)		TAS 100(A) ASTM D1929 ASTM D635	One way valve vent used to relieve built-up pressure within the roof system. GAF Vent Stacks are available in metal or plastic.

APPROVED INSULATIONS:

TABLE 2

<u>Product Name</u>	<u>Product Description</u>	<u>Manufacturer (With Current NOA)</u>
EnergyGuard™ RA PolyIso Insulation & EnergyGuard™ RN PolyIso Insulation	Polyisocyanurate foam insulation	GAF Materials Corp.
EnergyGuard™ Composite	Polyisocyanurate foam insulation with high density fiberboard or Permalite perlite insulation.	GAF Materials Corp.
EnergyGuard™ Fiberboard	Fiberboard insulation.	GAF Materials Corp.
EnergyGuard™ PolyIso	Polyisocyanurate foam insulation	GAF Materials Corp.
EnergyGuard™ Perlite	Perlite insulation board.	GAF Materials Corp.
EnergyGuard™ Recover Board	Perlite recover board	GAF Materials Corp.
Structodek® TD	Flame Resistant High Density Wood Fiber board.	Blue Ridge Fiberboard, Inc
Structodek®	Insulation board	Blue Ridge Fiberboard, Inc
SECUROCK®	Gypsum board	USG
Dens Deck®, Dens Deck Prime®, Dens Deck DuraGuard™	Water resistant gypsum board	G-P Gypsum Corp.

APPROVED FASTENERS:

TABLE 3

<u>Fastener Number</u>	<u>Product Name</u>	<u>Product Description</u>	<u>Dimensions</u>	<u>Manufacturer (With Current NOA)</u>
1.	N/A	N/A	N/A	N/A



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APPROVED SURFACING/COATING OPTIONS:

TABLE 4

System
Number

Application

Surfacing is Optional on granular surfaced membranes but required for smooth membranes.
Chosen components must be applied according to manufacturer's application instructions.

1. Gravel or slag applied at 400 lbs./sq. and 300 lbs./sq. respectively in a flood coat of approved asphalt at 60 lbs./sq. or applied in a flood coat of Leak Buster™ Matrix™ 103 Cold Process Adhesive applied at a rate of 3 gal./sq.
2. Leak Buster™ Matrix™ 303 Premium Fibered Aluminum Roof Coating, at 1.5 gal./sq.
3. Leak Buster™ Matrix™ 322, TOPCOAT® MB Plus, TOPCOAT® FireShield Elastomeric Roofing Membrane, applied at 1 to 1.5 gal./sq.
4. TOPCOAT® EnergyCote™ roof coating applied at 1 to 1.5 gal./sq.
5. TOPCOAT® Surface Seal, TOPCOAT® FireShield® SB Solvent based Elastomeric Roofing Membrane applied at 1 to 1.5 gal./sq.
6. Advance Green Technologies Photovoltaic Laminate solar energy collector auxiliary roof equipment installed in compliance with manufacturer's specifications and applicable Building Codes.

EVIDENCE SUBMITTED:

<u>Test Agency</u>	<u>Test Identifier</u>	<u>Description</u>	<u>Date</u>
Factory Mutual Research Corp.	FMRC 1996	Current Insulation Attachment Requirements	01.01.96
Factory Mutual Research Corp.	J.I. 2B8A4.AM	4470	07.02.97
	J.I. 3B9Q1.AM		01.08.98
	J.I. 0D0A8.AM		07.09.99
	J.I. 0D1A8.AM	4470 - TAS 114	07.29.94
	J.I. 0Y9Q5.AM	4470 - TAS 114	04.01.98
	3017250	4470	05.05.04
	3036980	4470	08.14.09
Trinity ERD	G6850.08.07-1	ASTM D 3909	08.13.07



APPROVED ASSEMBLIES:

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type A(1): Insulation layer adhered with approved asphalt.

All General and System Limitations shall apply.

One or more layers of any of the following insulations.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
EnergyGuard™ Composite, EnergyGuard™ RA Composite Minimum 1.75" thick	N/A	N/A

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of base sheet. All insulation shall be adhered to the deck in full mopping of approved asphalt within the EVT range and at a rate of 20-40 lbs/100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment. Composite insulation panels used as a top layer shall be placed with the polyisocyanurate side facing down.

- Base Sheet:** Install one ply of GAFGLAS® #75 Base Sheet, GAFGLAS® #80 Ultima™ Base Sheet, GAFGLAS® PLY 4, GAFGLAS® FlexPly™ 6, RUBEROID® Modified Base Sheet or RUBEROID® 20 directly to the insulated substrate. Adhere with any approved mopping asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
- Ply Sheet:** Two or more plies of GAFGLAS® Ply 4 or GAFGLAS® FlexPly™ 6 ply sheets adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
- Cap Sheet:** (Optional) One ply of GAFGLAS® Mineral Surfaced Cap Sheet or GAFGLAS® EnergyCap™ BUR Mineral Surface Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
- Surfacing: (Optional)**
Apply any surfacing/coating option listed in Table 4.
- Note:** Chosen components must be applied according to manufacturer's application instructions.
- Maximum Design Pressure:** -140 psf (See General Limitation #9.)



Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type A(2): Insulation layer adhered with approved asphalt.

All General and System Limitations shall apply.

One or more layers of any of the following insulations.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
EnergyGuard™ Perlite Roof Insulation Minimum 1" thick	N/A	N/A
Structodek®, Structodek® TD, Dens Deck® Minimum ½" thick	N/A	N/A

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of base sheet. All insulation shall be adhered to the deck in full mopping of approved asphalt within the EVT range and at a rate of 20-40 lbs/100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment. Composite insulation panels used as a top layer shall be placed with the polyisocyanurate side facing down.

- Base Sheet:** Install one ply of GAFGLAS® #75 Base Sheet, GAFGLAS® #80 Ultima™ Base Sheet, GAFGLAS® PLY 4, GAFGLAS® FlexPly™ 6, RUBEROID® Modified Base Sheet or RUBEROID® 20 directly to the insulated substrate. Adhere with any approved mopping asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
- Ply Sheet:** One or more plies of GAFGLAS® Ply 4 or GAFGLAS® FlexPly™ 6 ply sheets adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
- Cap Sheet:** (Optional) One ply of GAFGLAS® Mineral Surfaced Cap Sheet or GAFGLAS® EnergyCap™ BUR Mineral Surface Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Surfacing: (Optional)

Apply any surfacing/coating option listed in Table 4.

Note: Chosen components must be applied according to manufacturer's application instructions.

Maximum Design

Pressure: -270 psf (See General Limitation #9.)



Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type A(3): Insulation layer adhered with approved asphalt.

All General and System Limitations shall apply.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
EnergyGuard™ RN PolyIso Insulation Minimum 2" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
EnergyGuard™ Perlite Roof Insulation Minimum ½" thick	N/A	N/A

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of base sheet. All insulation shall be adhered to the deck in full mopping of approved asphalt within the EVT range and at a rate of 20-40 lbs/100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment. Composite insulation panels used as a top layer shall be placed with the polyisocyanurate side facing down.

- Base Sheet:** Install one ply of GAFGLAS® #75 Base Sheet, GAFGLAS® #80 Ultima™ Base Sheet, GAFGLAS® PLY 4, GAFGLAS® FlexPly™ 6, RUBEROID® Modified Base Sheet or RUBEROID® 20 directly to the insulated substrate. Adhere with any approved mopping asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
- Ply Sheet:** One or more plies of GAFGLAS® Ply 4 or GAFGLAS® FlexPly™ 6 ply sheets adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
- Cap Sheet:** (Optional) One ply of GAFGLAS® Mineral Surfaced Cap Sheet or GAFGLAS® EnergyCap™ BUR Mineral Surface Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
- Surfacing: (Optional)**
Apply any surfacing/coating option listed in Table 4.

Note: Chosen components must be applied according to manufacturer's application instructions.

Maximum Design

Pressure: -322.5 psf (See General Limitation #9.)



Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type A(4): Insulation layers adhered with approved asphalt.

All General and System Limitations shall apply.

One or more layers of any of the following insulations.

Insulation Layer

**Insulation Fasteners
(Table 3)**

**Fastener
Density/ft²**

EnergyGuard Perlite Roof Insulation

Minimum 3/4" thick

N/A

N/A

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of base sheet. All insulation shall be adhered to the deck in full mopping of approved asphalt within the EVT range and at a rate of 20-40 lbs/100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment. Composite insulation panels used as a top layer shall be placed with the polyisocyanurate side facing down.

Base Sheet: Install one ply of GAFGLAS® #75 Base Sheet, GAFGLAS® #80 Ultima™ Base Sheet, GAFGLAS® PLY 4, GAFGLAS® FlexPly™ 6, RUBEROID® Modified Base Sheet or RUBEROID® 20 directly to the insulated substrate. Adhere with any approved mopping asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Ply Sheet: One or more plies of GAFGLAS® Ply 4® or GAFGLAS FlexPly 6 ply sheets adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Cap Sheet: (Optional) One ply of GAFGLAS® Mineral Surfaced Cap Sheet or GAFGLAS® EnergyCap™ BUR Mineral Surface Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Surfacing: (Optional)

Apply any surfacing/coating option listed in Table 4.

Note: Chosen components must be applied according to manufacturer's application instructions.

Maximum Design

Pressure: -137 psf (See General Limitation #9.)



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Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type A(5): Insulation layers adhered with approved asphalt.

All General and System Limitations shall apply.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
EnergyGuard™ RA PolyIso Insulation, EnergyGuard™ RN PolyIso Insulation, EnergyGuard™ Composite, EnergyGuard™ RA Composite Minimum 1.25" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
EnergyGuard™ Perlite Roof Insulation Minimum ½" thick	N/A	N/A

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of base sheet. All insulation shall be adhered to the deck in full mopping of approved asphalt within the EVT range and at a rate of 20-40 lbs/100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment. Composite insulation panels used as a top layer shall be placed with the polyisocyanurate side facing down.

- Base Sheet:** Install one ply of GAFGLAS® #75 Base Sheet, GAFGLAS® #80 Ultima™ Base Sheet, GAFGLAS® PLY 4, GAFGLAS® FlexPly™ 6, RUBEROID® Modified Base Sheet or RUBEROID® 20 directly to the insulated substrate. Adhere with any approved mopping asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
- Ply Sheet:** One or more plies of GAFGLAS® Ply 4 or GAFGLAS® FlexPly™ 6 ply sheets adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
- Cap Sheet:** (Optional) One ply of GAFGLAS® Mineral Surfaced Cap Sheet or GAFGLAS® EnergyCap™ BUR Mineral Surface Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
- Surfacing: (Optional)**
Apply any surfacing/coating option listed in Table 4.

Note: Chosen components must be applied according to manufacturer's application instructions.

Maximum Design

Pressure: -126 psf (See General Limitation #9.)



Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type A(6): Insulation layers adhered with approved asphalt.

All General and System Limitations shall apply.

One or more layers of any of the following insulations.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
EnergyGuard™ Perlite Roof Insulation Minimum ¾" thick	N/A	N/A

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of base sheet. All insulation shall be adhered to the deck in full mopping of approved asphalt within the EVT range and at a rate of 20-40 lbs/100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment. Composite insulation panels used as a top layer shall be placed with the polyisocyanurate side facing down.

- Base Sheet:** Install one ply of GAFGLAS® #75 Base Sheet, GAFGLAS® #80 Ultima™ Base Sheet, GAFGLAS® PLY 4, GAFGLAS® FlexPly™ 6, RUBEROID® Modified Base Sheet or RUBEROID® 20 directly to the insulated substrate. Adhere with any approved mopping asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
- Ply Sheet:** One or more plies of GAFGLAS® Ply 4 or GAFGLAS® FlexPly™ 6 ply sheets adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
- Cap Sheet:** (Optional) One ply of GAFGLAS® Mineral Surfaced Cap Sheet or GAFGLAS® EnergyCap™ BUR Mineral Surface Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
- Surfacing: (Optional)**
Apply any surfacing/coating option listed in Table 4.

Note: Chosen components must be applied according to manufacturer's application instructions.

Maximum Design

Pressure: -128 psf (See General Limitation #9.)



Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type A(7): Insulation layers adhered with approved asphalt.

All General and System Limitations shall apply.

One or more layers of any of the following insulations.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
High Density Wood Fiberboard, Structodek [®] , Structodek [®] TD, Dens Deck [®] Minimum ½" thick	N/A	N/A

Note: Apply layers of insulation in a full mopping of any approved mopping asphalt within the EVT range and at a rate of 20-40 lbs/100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side facing down.

- Base Sheet:** Install one ply of GAFGLAS[®] #75 Base Sheet, GAFGLAS[®] #80 Ultima™ Base Sheet, GAFGLAS[®] PLY 4, GAFGLAS[®] FlexPly™ 6, RUBEROID[®] Modified Base Sheet or RUBEROID[®] 20 directly to the insulated substrate. Adhere with any approved mopping asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
- Ply Sheet:** One or more plies of GAFGLAS[®] Ply 4 or GAFGLAS[®] FlexPly™ 6 ply sheets adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
- Cap Sheet:** (Optional) One ply of GAFGLAS[®] Mineral Surfaced Cap Sheet or GAFGLAS[®] EnergyCap™ BUR Mineral Surface Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
- Surfacing: (Optional)**
Apply any surfacing/coating option listed in Table 4.

Note: Chosen components must be applied according to manufacturer's application instructions.

Maximum Design

Pressure: -140 psf (See General Limitation #9.)



Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type A(8): Insulation layers adhered with approved asphalt.

All General and System Limitations shall apply.

One or more layers of any of the following insulations.

Base Insulation Layer

**Insulation Fasteners
(Table 3)**

**Fastener
Density/ft²**

EnergyGuard™ RA PolyIso Insulation, EnergyGuard™ RN PolyIso Insulation, EnergyGuard™ Composite, EnergyGuard™ RA Composite

Minimum 1.25" thick

N/A

N/A

Top Insulation Layer

**Insulation Fasteners
(Table 3)**

**Fastener
Density/ft²**

EnergyGuard™ Fiberboard, Structodek®, Structodek® TD, Dens Deck®

Minimum ½" thick

N/A

N/A

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of base sheet. All insulation shall be adhered to the deck in full mopping of approved asphalt within the EVT range and at a rate of 20-40 lbs/100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels used as a top layer shall be placed with the polyisocyanurate side facing down.

- Base Sheet:** Install one ply of GAFGLAS® #75 Base Sheet, GAFGLAS® #80 Ultima™ Base Sheet, GAFGLAS® PLY 4, GAFGLAS® FlexPly™ 6, RUBEROID® Modified Base Sheet or RUBEROID® 20 directly to the insulated substrate. Adhere with any approved mopping asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
- Ply Sheet:** One or more plies of GAFGLAS® Ply 4 or GAFGLAS® FlexPly™ 6 ply sheets adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
- Cap Sheet:** (Optional) One ply of GAFGLAS® Mineral Surfaced Cap Sheet or GAFGLAS® EnergyCap™ BUR Mineral Surface Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
- Surfacing: (Optional)**
Apply any surfacing/coating option listed in Table 4.

Note: Chosen components must be applied according to manufacturer's application instructions.

Maximum Design

Pressure: -162 psf (See General Limitation #9.)



Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type A(9): Insulation layers adhered with approved asphalt.

All General and System Limitations shall apply.

One or more layers of any of the following insulations.

Base Insulation Layer

	Insulation Fasteners (Table 3)	Fastener Density/ft²
EnergyGuard™ RA PolyIso Insulation, EnergyGuard™ RN PolyIso Insulation, EnergyGuard™ Composite, EnergyGuard™ RA Composite Minimum 1.25" thick	N/A	N/A

Top Insulation Layer

	Insulation Fasteners (Table 3)	Fastener Density/ft²
EnergyGuard™ Perlite Roof Insulation Minimum ¾" thick	N/A	N/A

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of base sheet. All insulation shall be adhered to the deck in full mopping of approved asphalt within the EVT range and at a rate of 20-40 lbs/100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels used as a top layer shall be placed with the polyisocyanurate side facing down.

- Base Sheet:** Install one ply of GAFGLAS® #75 Base Sheet, GAFGLAS® #80 Ultima™ Base Sheet, GAFGLAS® PLY 4, GAFGLAS® FlexPly™ 6, RUBEROID® Modified Base Sheet or RUBEROID® 20 directly to the insulated substrate. Adhere with any approved mopping asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
- Ply Sheet:** One or more plies of GAFGLAS® Ply 4 or GAFGLAS® FlexPly™ 6 ply sheets adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
- Cap Sheet:** (Optional) One ply of GAFGLAS® Mineral Surfaced Cap Sheet or GAFGLAS® EnergyCap™ BUR Mineral Surface Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Surfacing: (Optional)

Apply any surfacing/coating option listed in Table 4.

Note: Chosen components must be applied according to manufacturer's application instructions.

Maximum Design

Pressure: -157 psf (See General Limitation #9.)



Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type D(1): Anchor sheet adhered with approved asphalt; all layers of insulation adhered with approved asphalt.

All General and System Limitations shall apply.

One or more layers of any of the following insulations.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
EnergyGuard™ RA PolyIso Insulation, EnergyGuard™ RN PolyIso Insulation Composite Minimum 1" thick	N/A	N/A
EnergyGuard™ Perlite Roof Insulation, EnergyGuard™ Perlite Recover Board Minimum ½" thick	N/A	N/A

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of base sheet. All insulation shall be adhered to the anchor sheet in full mopping of approved hot asphalt within the EVT range and at a rate of 20-40 lbs/100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side facing down. GAF requires either a ply of GAFGLAS STRATAVENT® Eliminator™ Perforated laid dry or a layer of EnergyGuard PERLITE or wood fiber overlay board on all polyisocyanurate insulation applications.

Anchor Sheet: (Optional) Install one ply of GAFGLAS® #75 Base Sheet, GAFGLAS® #80 Ultima Base Sheet, GAFGLAS® PLY 4, GAFGLAS® FlexPly™ 6, GAFGLAS® STRATAVENT® Eliminator Perforated, RUBEROID® Modified Base Sheet or RUBEROID® 20 directly to primed deck adhere with any approved mopping asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Base Sheet: (Optional) Install one ply of GAFGLAS® #75 Base Sheet, GAFGLAS® #80 Ultima™ Base Sheet, GAFGLAS® PLY 4, GAFGLAS® FlexPly™ 6, GAFGLAS® STRATAVENT® Eliminator Perforated, RUBEROID® Modified Base Sheet or RUBEROID® 20 directly to the insulated substrate. Adhere with any approved mopping asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Ply Sheet: Two or more plies of GAFGLAS® Ply 4 or GAFGLAS® FlexPly™ 6 ply sheets adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Cap Sheet: (Optional) One ply of GAFGLAS® Mineral Surfaced Cap Sheet or GAFGLAS® EnergyCap™ BUR Mineral Surface Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Surfacing: (Optional)

Apply any surfacing/coating option listed in Table 4.

Note: Chosen components must be applied according to manufacturer's application instructions.

Maximum Design

Pressure: -90 psf (See General Limitation #9.)



Deck Type 3: Concrete Decks, Non-Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type F(1): Base sheet adhered with approved asphalt.

All General and System Limitations shall apply.

Base Sheet: Install one ply of GAFGLAS® #75 base sheet, GAFGLAS® #80 Ultima Base Sheet, GAFGLAS® PLY 4, GAFGLAS® FlexPly™ 6, GAFGLAS® STRATAVENT® Eliminator Perforated (laid dry), RUBEROID® Modified Base Sheet or RUBEROID® 20 directly to the primed deck. Adhere with any approved mopping asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Ply Sheet: (Optional, required when used with RUBEROID® 20) One or more plies of GAFGLAS® PLY 4 or GAFGLAS® FlexPly™ 6 ply sheets adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Cap Sheet: (Optional) One ply of GAFGLAS® Mineral Surfaced Cap Sheet or GAFGLAS® EnergyCap™ BUR Mineral Surface Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Surfacing: (Optional)

Apply any surfacing/coating option listed in Table 4.

Note: Chosen components must be applied according to manufacturer's application instructions.

Maximum Design

Pressure: -90 psf (See General Limitation #9.)



Deck Type 3: Concrete Decks, Non-Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type F(2): Base sheet adhered with approved asphalt.

All General and System Limitations shall apply.

Base Sheet: Install one ply of GAFGLAS® #75 Base Sheet, GAFGLAS® #80 Ultima Base Sheet, GAFGLAS® PLY 4, GAFGLAS® FlexPly™ 6, RUBEROID® Modified Base Sheet or RUBEROID® 20 directly to the primed deck. Adhere with any approved mopping asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Ply Sheet: One or more plies of GAFGLAS® PLY 4 or GAFGLAS® FlexPly™ 6 ply sheets adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Cap Sheet: (Optional) One ply of GAFGLAS® Mineral Surfaced Cap Sheet or GAFGLAS® EnergyCap™ BUR Mineral Surface Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Surfacing: (Optional)

Apply any surfacing/coating option listed in Table 4.

Note: Chosen components must be applied according to manufacturer's application instructions.

Maximum Design

Pressure: -457.5 psf (See General Limitation #9.)

Deck Type 3: Concrete Decks, Non-Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type F(3): Base sheet GAFGLAS® STRATAVENT® Perforated, loose laid dry.

All General and System Limitations shall apply.

Base Sheet: GAFGLAS® STRATAVENT® Eliminator Perforated, loose laid dry.

Ply Sheet: One or more plies of GAFGLAS® PLY 4 or GAFGLAS® FlexPly™ 6 ply sheets adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Cap Sheet: (Optional) One ply of GAFGLAS® Mineral Surfaced Cap Sheet or GAFGLAS® EnergyCap™ BUR Mineral Surface Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Surfacing: (Optional)

Apply any surfacing/coating option listed in Table 4.

Note: Chosen components must be applied according to manufacturer's application instructions.

Maximum Design

Pressure: -90 psf (See General Limitation #9.)



CONCRETE DECK SYSTEM LIMITATIONS:

1. If mechanical attachment to the structural deck through the lightweight insulating concrete is proposed, a field withdrawal resistance testing shall be performed to determine equivalent or enhanced fastener patterns and density. All testing and fastening design shall be in compliance with Testing Application Standard TAS 105 and Roofing Application Standard RAS 117; calculations shall be signed and sealed by a Florida Registered Engineer, Architect, or Registered Roof Consultant.

GENERAL LIMITATIONS:

1. Fire classification is not part of this acceptance; refer to a current Approved Roofing Materials Directory for fire ratings of this product.
2. Insulation may be installed in multiple layers. The first layer shall be attached in compliance with Product Control Approval guidelines. All other layers shall be adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq., or mechanically attached using the fastening pattern of the top layer
3. All standard panel sizes are acceptable for mechanical attachment. When applied in approved asphalt, panel size shall be 4' x 4' maximum.
4. An overlay and/or recovery board insulation panel is required on all applications over closed cell foam insulations when the base sheet is fully mopped. If no recovery board is used the base sheet shall be applied using spot mopping with approved asphalt, 12" diameter circles, 24" o.c.; or strip mopped 8" ribbons in three rows, one at each side lap and one down the center of the sheet allowing a continuous area of ventilation. Encircling of the strips is not acceptable. A 6" break shall be placed every 12' in each ribbon to allow cross ventilation. Asphalt application of either system shall be at a minimum rate of 12 lbs./sq.
Note: Spot attached systems shall be limited to a maximum design pressure of -45 psf.
5. Fastener spacing for insulation attachment is based on a Minimum Characteristic Force (F') value of 275 lbf., as tested in compliance with Testing Application Standard TAS 105. If the fastener value, as field-tested, are below 275 lbf. insulation attachment shall not be acceptable.
6. Fastener spacing for mechanical attachment of anchor/base sheet or membrane attachment is based on a minimum fastener resistance value in conjunction with the maximum design value listed within a specific system. Should the fastener resistance be less than that required, as determined by the Building Official, a revised fastener spacing, prepared, signed and sealed by a Florida Registered Engineer, Architect, or Registered Roof Consultant may be submitted. Said revised fastener spacing shall utilize the withdrawal resistance value taken from Testing Application Standards TAS 105 and calculations in compliance with Roofing Application Standard RAS 117.
7. Perimeter and corner areas shall comply with the enhanced uplift pressure requirements of these areas. Fastener densities shall be increased for both insulation and base sheet as calculated in compliance with Roofing Application Standard RAS 117. Calculations prepared, signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant **(When this limitation is specifically referred within this NOA, General Limitation #9 will not be applicable.)**
8. All attachment and sizing of perimeter nailers, metal profile, and/or flashing termination designs shall conform to Roofing Application Standard RAS 111 and applicable wind load requirements.
9. The maximum designed pressure limitation listed shall be applicable to all roof pressure zones (i.e. field, perimeters, and corners). Neither rational analysis, nor extrapolation shall be permitted for enhanced fastening at enhanced pressure zones (i.e. perimeters, extended corners and corners). **(When this limitation is specifically referred within this NOA, General Limitation #7 will not be applicable.)**
10. All products listed herein shall have a quality assurance audit in accordance with the Florida Building Code and Rule 9B-72 of the Florida Administrative Code.

END OF THIS ACCEPTANCE



NOA No.: 08-0922.04
Expiration Date: 11/06/13
Approval Date: 05/05/10
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